

**UNITED STATES DEPARTMENT OF COMMERCE****Patent and Trademark Office**Address: COMMISSIONER OF PATENTS AND TRADEMARKS
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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.
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09/316,851 05/21/99 BUI

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THOMPSON, M

ART UNIT	PAPER NUMBER
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 3763**DATE MAILED:**

09/13/01

Please find below and/or attached an Office communication concerning this application or proceeding.**Commissioner of Patents and Trademarks**

Office Action Summary	Application No.	Applicant(s)
	09/316,851	BUI, HAI
	Examiner Michael M. Thompson	Art Unit 3763

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1) Responsive to communication(s) filed on ____.
 2a) This action is FINAL. 2b) This action is non-final.
 3) Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4) Claim(s) 1,3-8,13,16-22,35 and 37-50 is/are pending in the application.
 4a) Of the above claim(s) ____ is/are withdrawn from consideration.
 5) Claim(s) ____ is/are allowed.
 6) Claim(s) 1,3-8,13,16-22,35 and 37-50 is/are rejected.
 7) Claim(s) ____ is/are objected to.
 8) Claim(s) ____ are subject to restriction and/or election requirement.

Application Papers

9) The specification is objected to by the Examiner.
 10) The drawing(s) filed on ____ is/are: a) accepted or b) objected to by the Examiner.
 Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
 11) The proposed drawing correction filed on ____ is: a) approved b) disapproved by the Examiner.
 If approved, corrected drawings are required in reply to this Office action.
 12) The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

13) Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
 a) All b) Some * c) None of:
 1. Certified copies of the priority documents have been received.
 2. Certified copies of the priority documents have been received in Application No. ____.
 3. Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
 * See the attached detailed Office action for a list of the certified copies not received.
 14) Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
 a) The translation of the foreign language provisional application has been received.
 15) Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)	4) <input type="checkbox"/> Interview Summary (PTO-413) Paper No(s). ____ .
2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)	5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152)
3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449) Paper No(s) ____ .	6) <input type="checkbox"/> Other: _____

DETAILED ACTION

Drawings

1. The drawings are objected to under 37 CFR 1.83(a). The drawings must show every feature of the invention specified in the claims. Therefore, the accumulator in claim 37 etc. must be shown or the feature(s) canceled from the claim(s). No new matter should be entered.

Claim Rejections - 35 USC § 112

2. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

3. Claims 1, 3-8, 13, 16-22, 35, 37-50 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention. It is unclear to the Examiner what Applicant intends the accumulator to encompass. In claim 1 it appears that the accumulator is a pressure sensor while in claim 37 it appears that the accumulator is something separate and distinct form a pressure sensor. In claim 41 it appears as if the accumulator is one large chamber which is then divided into two chambers through separation of a flexible membrane. Clarification is needed.

Claim Rejections - 35 U.S.C. § 102/103

4. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless --

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

5. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

6. Claims 1, 4-6, 8, 13, 16-18, 20, 21, 35, 40-50 are rejected under 35 U.S.C. 102(b) as anticipated by or, in the alternative, under 35 U.S.C. 103(a) as obvious over Costin ('256).

Costin teaches an "irrigation system" with a reservoir, pump line coupled to the pump, pressure sensor, accumulator, controller coupled to pressure sensor, aspiration system, pump, line, and pressure sensor and a medical device coupled to both the irrigation line and aspiration line.

Costin teaches a flexible membrane (Figure 10) separating a first and second chamber and in communication with the pressure transducer/sensor, and irrigation line. In column 10 Costin teaches that top membrane (1200) made of polysilicon detects pressure when the distance between the polysilicon membrane and the n+ well (1100) changes. It is the Examiner's position that the only reasonable interpretation of these statements is that the polysilicon membrane must be flexible and must deflect to cause a change brought about by pressure to alter the distance between the n+ well and polysilicone membrane. The layer of silicon nitride is merely used as an insulator. The Examiner would also conclude that on either side of the barrier is a first and second chamber as described by Applicant with one of the chambers being in fluid communication with a pressure transducer to assimilate the information about the instant pressure. Furthermore it is the Examiner's position that the ability of the pressure sensor (104)

to maintain intraocular pressure is also inherent if not obvious. When puncturing the eye it would seem important to maintain the pressure of the vitreous chamber to prevent leakage of the vitreous humor and/or collapse of the eyeball. Also, pressure sensors that monitor the aspiration line and irrigation line are shown in (for example) Figure 6. Costin also teaches a controller that varies the pump, determines a flowrate, by providing output signals.

7. In the alternative, it is the Examiner's position that the Costin patent teaches all of the structural limitations of the claims and their functions, since it has been held that rearranging parts of an invention involves only routine skill in the art. *In re Japikse*, 86 USPQ 70. In column 10 Costin teaches that top membrane (1200) made of polysilicon detects pressure when the distance between the polysilicon membrane and the n+ well (1100) changes and the membrane must be flexible to cause a change brought about by pressure to alter the distance between the n+ well and polysilicone membrane. The layer of silicon nitride is merely used as an insulator. Since the membrane acts as a pressure sensor barrier, the Examiner would further conclude that on either side of the barrier is a first and second chamber as described by Applicant with one of the chambers being in fluid communication with a pressure transducer to assimilate the information about the instant pressure. Furthermore it is the Examiner's position that the ability of the pressure sensor to maintain intraocular pressure is also inherent if not obvious. When puncturing the eye it would seem important to maintain the pressure of the vitreous chamber to prevent leakage of the vitreous humor and/or collapse of the eyeball. Also, pressure sensors that monitor the aspiration line and irrigation line are shown in (for example) Figure 6. Please note it has also been held that mere reversal of the essential working parts of a device involves only routine skill in the art. *In re Einstein*, 8 USPQ 167.

8. Claims 3, 7, 19, 22, 23, 34, and 37-39 are rejected under 35 U.S.C. 103(a) as being unpatentable over Costin in view of Voss et al.. Costin teaches all of the limitations of the claims except for explicitly stating that the controller determines an actual fluidic resistance from the flowrate and provides an output signal. Voss et al. teaches a fluid flow device that monitors fluidic resistance through the monitoring of the impedance to fluid flow. Voss et al. teaches that a device containing an impedance monitor can detect the fluids "fluidic resistance" and calculate a resistance to flow. Costin teaches a second embodiment of his device containing an impedance monitor in Figure 8. Therefore, it is the Examiner's position that it would have been obvious to one of ordinary skill in the art, at the time of invention, to have modified (if needed) the impedance monitor of Costin, with the impedance and fluidic calculator of resistance to allow the Costin device to monitor fluidic resistance since it well known in the art of fluid flowing systems to monitor impedance as taught by Costin, if not calculate fluid resistance as explicitly taught by Voss et al. With respect to a valve mechanism coupled to the irrigation line, the Examiner maintains that valves are well known in the art, and are attached to all types of fluid flow devices to prevent backflow, maintain pressure, prevent contamination, to include several other purposes.

Conclusion

9. Please note that the Preliminary amendment filed 08-10-01 appears to have incorrectly indicated claims 38-39 as being cancelled within the heading. The Examiner has treated them as un-cancelled claims. The Examiner asks that Applicant please indicate the status of these claims.

Contacts

Any inquiry concerning this communication or earlier communications from the Examiner should be directed to Michael Thompson whose telephone number is (703) 305-1619. The Examiner can normally be reached on Monday through Friday from 9 am to 5 PM.

If attempts to reach the Examiner by telephone are unsuccessful, the Examiner's Primary, AnhTuan Nguyen, can be reached on (703) 308-2154. The fax phone number for the organization where this application or proceeding is assigned is (703) 306-4520.

Michael M. Thompson

Patent Examiner

MT

September 05, 2001

ANHTUAN T. NGUYEN
PRIMARY EXAMINER

9/05/01.

Attachment for PTO-948 (Rev. 03/01, or earlier)

6/18/01

The below text replaces the pre-printed text under the heading, "Information on How to Effect Drawing Changes," on the back of the PTO-948 (Rev. 03/01, or earlier) form.

INFORMATION ON HOW TO EFFECT DRAWING CHANGES

1. Correction of Informalities -- 37 CFR 1.85

New corrected drawings must be filed with the changes incorporated therein. Identifying indicia, if provided, should include the title of the invention, inventor's name, and application number, or docket number (if any) if an application number has not been assigned to the application. If this information is provided, it must be placed on the front of each sheet and centered within the top margin. If corrected drawings are required in a Notice of Allowability (PTOL-37), the new drawings **MUST** be filed within the **THREE MONTH** shortened statutory period set for reply in the Notice of Allowability. Extensions of time may **NOT** be obtained under the provisions of 37 CFR 1.136(a) or (b) for filing the corrected drawings after the mailing of a Notice of Allowability. The drawings should be filed as a separate paper with a transmittal letter addressed to the Official Draftsperson.

2. Corrections other than Informalities Noted by Draftsperson on form PTO-948.

All changes to the drawings, other than informalities noted by the Draftsperson, **MUST** be made in the same manner as above except that, normally, a highlighted (preferably red ink) sketch of the changes to be incorporated into the new drawings **MUST** be approved by the examiner before the application will be allowed. No changes will be permitted to be made, other than correction of informalities, unless the examiner has approved the proposed changes.

Timing of Corrections

Applicant is required to submit the drawing corrections within the time period set in the attached Office communication. See 37 CFR 1.85(a).

Failure to take corrective action within the set period will result in **ABANDONMENT** of the application.